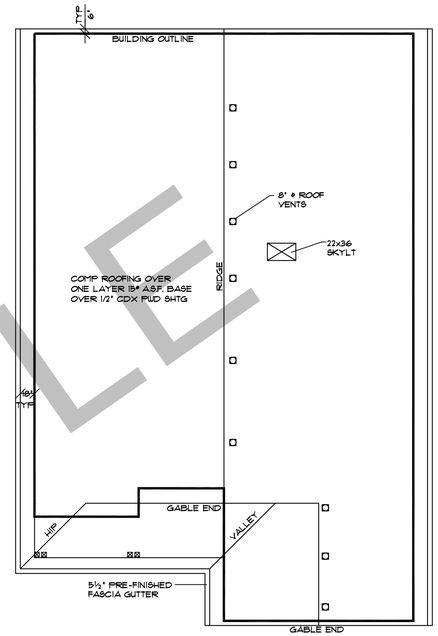
STREET ELEVATION

SCALE: 1/4" = 1'-0"



ROOF PLAN

SCALE: 1/8" = 1'-0"

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BELOW DATE
FEBRUARY 23, 2009
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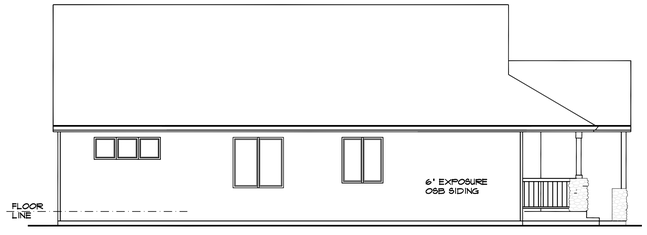
OVER THOSE OF EARLIER DATES

THE CARRINGTON T ● PLAN NUMBER 3295T

ELEVATIONS

SCALE: 1/4" = 1'-0"

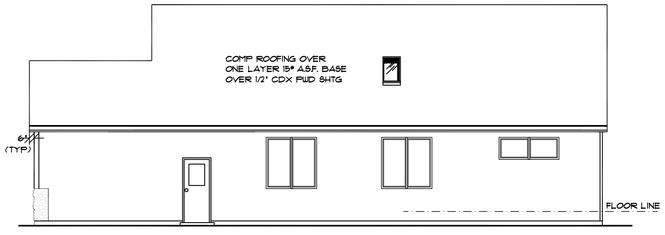


LEFT ELEVATION

SCALE: 1/8" = 1'-0"

REAR ELEVATION

SCALE: 1/8" = 1'-0"



RIGHT ELELVATION

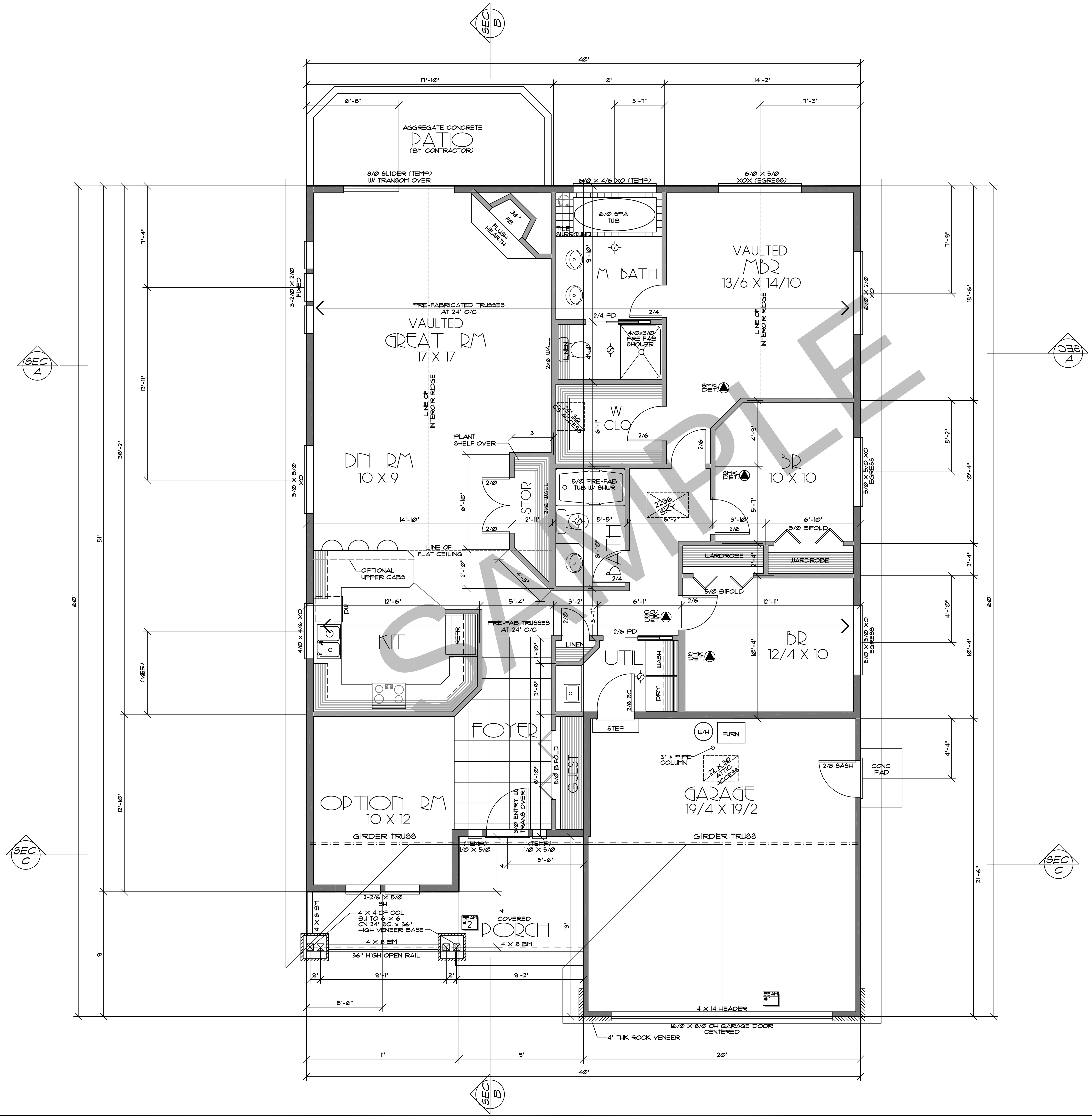
SCALE: 1/8" = 1'-0"

SUNTEL DESIGN

16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
503 624 0555

PLAN NR: 3295T
SHEET DESCRIP: ELEVATIONS
JOB NAME: CARRINGTON T
DATE: 10/05
REV:
SHEET NR: 1

A NORTHWEST DESIGN



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FEBRUARY 23, 2009

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THE CARRINGTON T • PLAN NUMBER 3295T

FLOOR PLAN

SCALE: 1/4" = 1'-0" • 1732 SQUARE FEET

SUNTEL DESIGN

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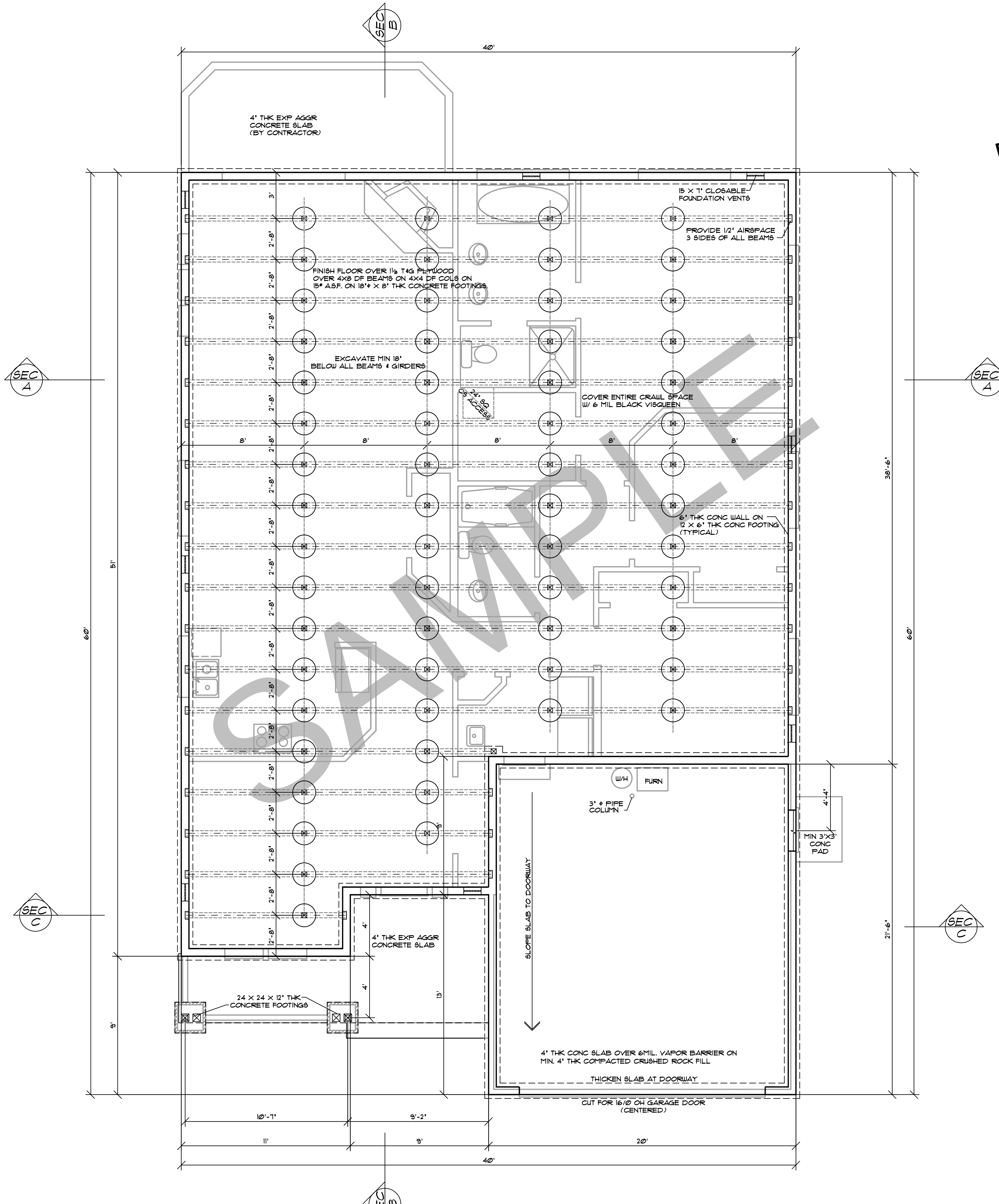
SUITE 103
LAKE OSWEGO, OR 97035
503 624 0555

PLAN NR:	3295T
SHEET DESCRIP:	FLOOR PLAN
JOB NAME:	CARRINGTON T
DATE:	10/05
REV:	
SHEET NR:	2

A NORTHWEST DESIGN



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FEBRUARY 23, 2009

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32" O.C. OPTION

THE CARRINGTON T • PLAN NUMBER 3295T

FOUNDATION PLAN

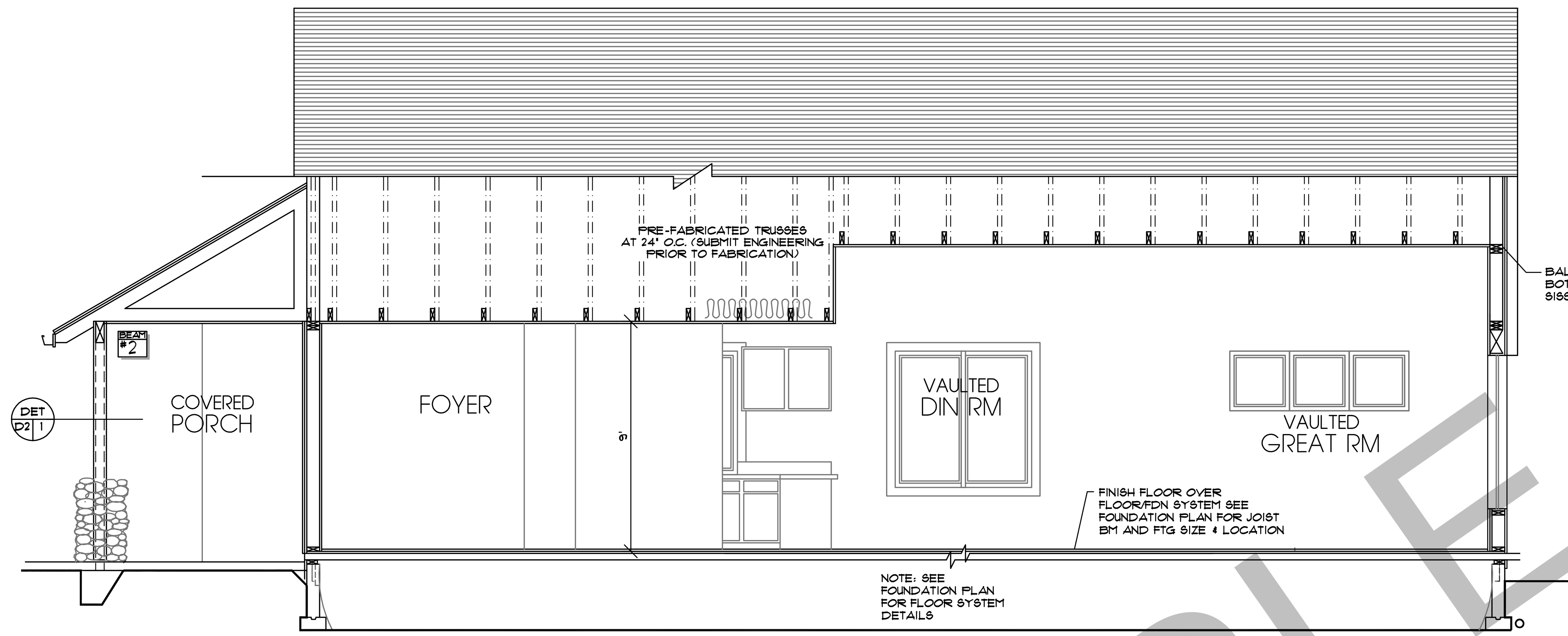
SCALE: 1/4" = 1'-0" • POST & BEAM OPTION

SUNTEL DESIGN

16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
503 624 0555

PLAN NR: 3295T
SHEET DESCRIP: P & B FDN
JOB NAME: CARRINGTON T
DATE: 10/05
REV:
SHEET NR: 3d

A NORTHWEST DESIGN


PRE-FABRICATED TRUSSES AT 24" O.C. (SUBMIT ENGINEERING PRIOR TO FABRICATION)
BALLOON FRM TO BOTTOM CHORD OF SISSOR TRUSS
COVERED PORCH
FOYER
VAULTED DIN RM
VAULTED GREAT RM
FINISH FLOOR OVER FLOOR/FDN SYSTEM SEE FOUNDATION PLAN FOR JOIST BM AND FTG SIZE & LOCATION
NOTE: SEE FOUNDATION PLAN FOR FLOOR SYSTEM DETAILS

CROSS SECTION B-B

SCALE: 1/4" = 1'-0"

REVISED

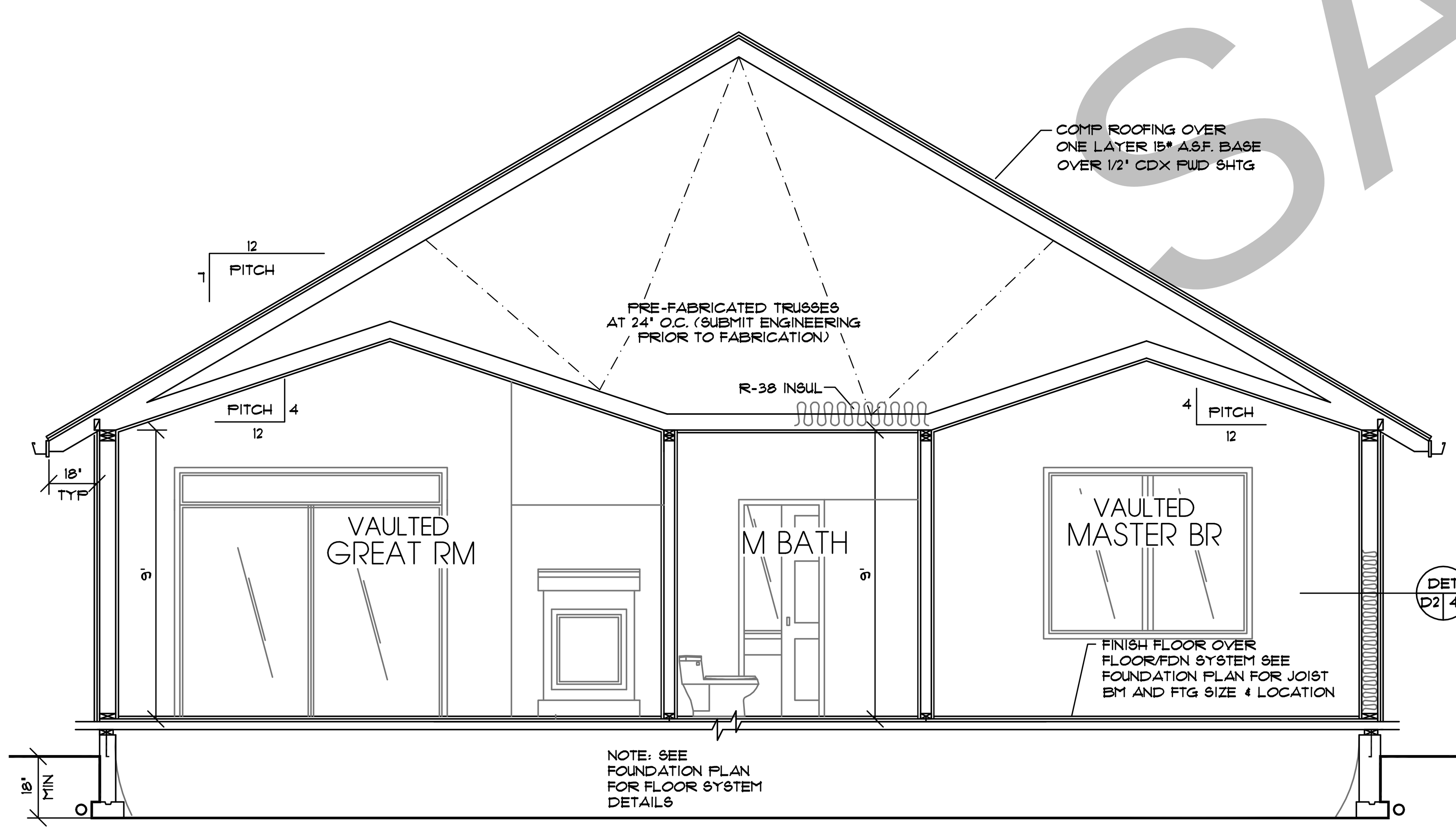
PARTS OR PART OF THIS DRAWING HAVE BEEN REVISED AS OF THE BELOW DATE

FEBRUARY 23, 2009

THIS DRAWING HAS PRIORITY OVER THOSE OF EARLIER DATES

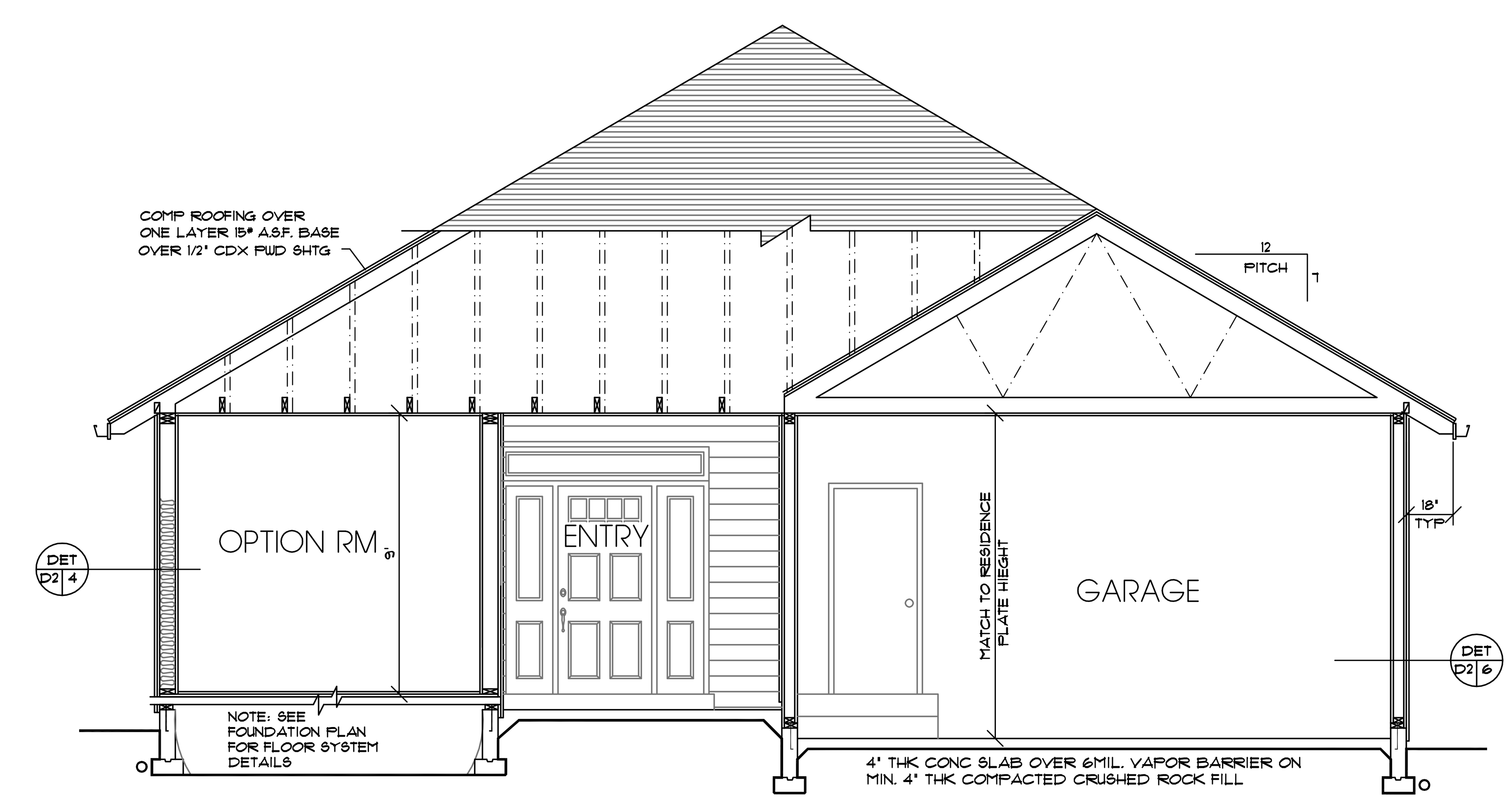
CONTRACTOR'S NOTE!

SUBMIT TRUSS DESIGN FOR ENGINEERING PRIOR TO FABRICATION & VERIFY LOCATION OF GIRDER TRUSSES W/ TRUSS COMPANY PRIOR TO FORMING FOUNDATION WALLS AS TO PROVIDE FOR ADDITIONAL LOADING FROM VARYING TRUSS DESIGN.
VERIFY ALL TRUSS SPANS & CONFIGURATIONS ON JOB SITE PRIOR TO FABRICATION.


COMP ROOFING OVER ONE LAYER 15# A.S.F. BASE OVER 1/2" CDX PWD SHTG
12
7 PITCH
PRE-FABRICATED TRUSSES AT 24" O.C. (SUBMIT ENGINEERING PRIOR TO FABRICATION)
R-38 INSUL
PITCH 4
12
4 PITCH
12
18" TYP
VAULTED GREAT RM
M BATH
VAULTED MASTER BR
FINISH FLOOR OVER FLOOR/FDN SYSTEM SEE FOUNDATION PLAN FOR JOIST BM AND FTG SIZE & LOCATION
NOTE: SEE FOUNDATION PLAN FOR FLOOR SYSTEM DETAILS
18" MIN
DET D2 4

CROSS SECTION A-A

SCALE: 1/4" = 1'-0"


COMP ROOFING OVER ONE LAYER 15# A.S.F. BASE OVER 1/2" CDX PWD SHTG
12
PITCH 7
18" TYP
DET D2 4
OPTION RM
ENTRY
MATCH TO RESIDENCE PLATE HEIGHT
GARAGE
DET D2 6
NOTE: SEE FOUNDATION PLAN FOR FLOOR SYSTEM DETAILS
4" THK CONC SLAB OVER 6MIL. VAPOR BARRIER ON MIN. 4" THK COMPACTED CRUSHED ROCK FILL

CROSS SECTION C-C

SCALE: 1/4" = 1'-0"

THE CARRINGTON T • PLAN NUMBER 3295T

CROSS SECTIONS

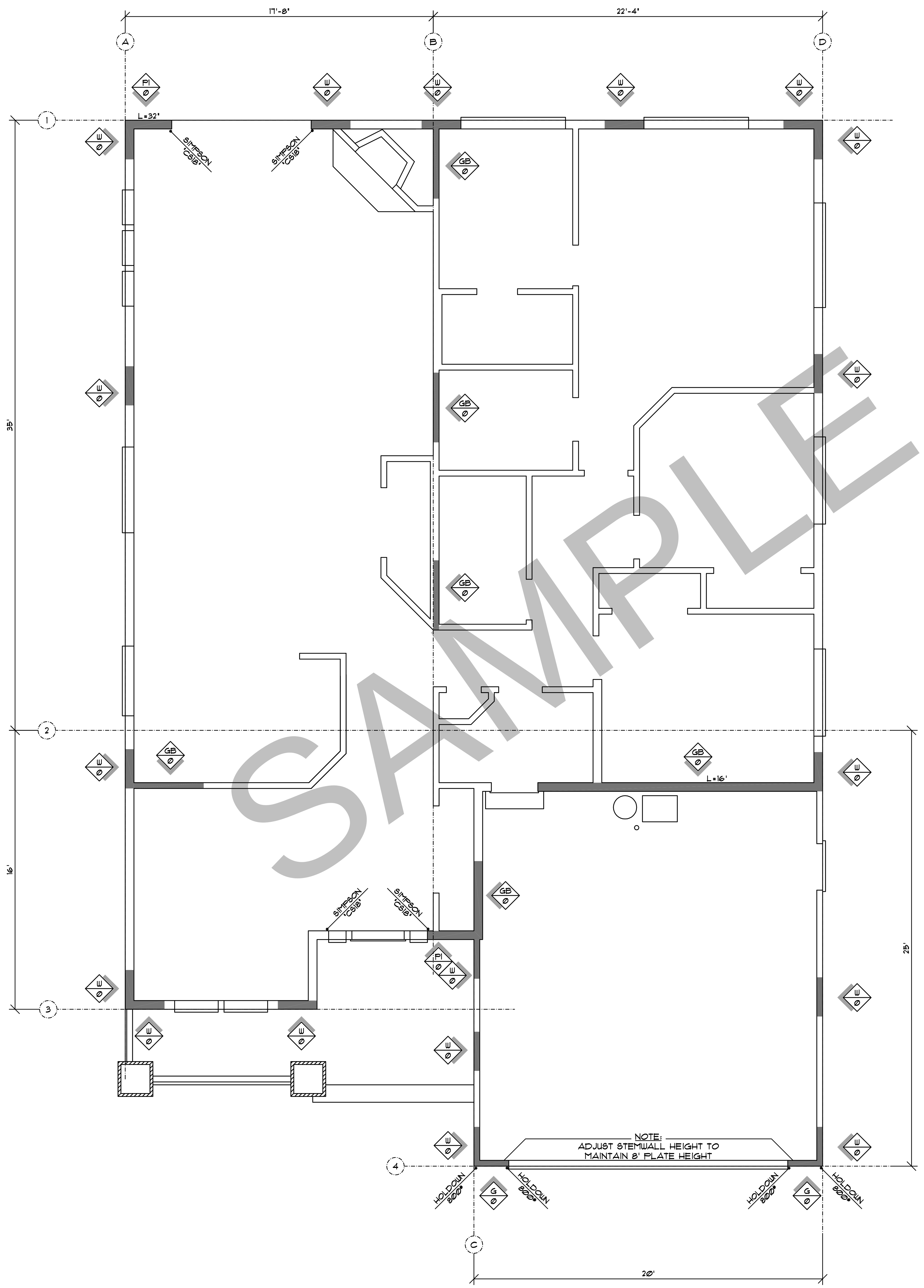
SCALE: 1/4" = 1'-0"

SUNTEL DESIGN

16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
503 624 0555

PLAN NR: 3295T
SHEET DESCRIP: SECTIONS
JOB NAME: CARRINGTON T
DATE: 10/05
REV:
SHEET NR: 4

A NORTHWEST DESIGN



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OCT 10, 2011

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LATERAL BRACING NOTES

1. SEE 'O' SHEETS FOR NOTES & DETAILS
2. ALL W PANELS TO BE 27" UNO
   ALL GB PANELS TO BE 48" UNO
3. EXTERIOR OF THE HOUSE TO BE SHEATHED W/ MIN 3/8"

THE CARRINGTON T ● PLAN NUMBER 3295T

PERSCRIPTIVE WALL BRACING

SCALE: 1/4" = 1'-0" ● 1732 SQUARE FEET

SUNTEL DESIGN
16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
503 624 0555

PLAN NR: 3295T
SHEET DESCRIP: PERSC. PTH.
JOB NAME: CARRINGTON T
DATE: 10/05
REV:
SHEET NR: S

A NORTHWEST DESIGN

TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NO. & TYPE OF FASTENER[a, b, c]	SPACING OF FASTENER
	ROOF		
1	BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOE NAIL	3-8d	--
2	CEILING JOISTS TO PLATE, TOE NAIL	3-8d	--
3	CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS, FACE NAIL	3-10d	--
4	COLLAR TIE RAFTER, FACE NAIL OR 1¼"x20 GAG RIDGE STRAP	3-10d	--
5	RAFTER TO TOP PLATE, TOE NAIL	2-16d	--
6	ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS: TOE NAIL FACE NAIL	4-16d 3-16d	-- --
	WALL		
7	BUILT-UP CORNER STUDS	10d	24" O.C.
8	BUILT-UP HEADER, TWO PIECES WITH ½" SPACER	16d	16" O.C. ALONG EA. EDGE
9	CONTINUED HEADER, TWO PIECES	16d	16" O.C. ALONG EA. EDGE
10	CONTINUED HEADER TO STUD, TOE NAIL	4-8d	--
11	DOUBLE STUDS, FACE NAIL	10d	24" O.C.
12	DOUBLE TOP PLATE, FACE NAIL	10d	24" O.C.
13	DOUBLE TOP PLATES, MIN 24" OFFSET OF END JOINTS, FACE NAIL IN LAPPED AREA	8-16d[j]	--
14	SOLE PLATE TO JOIST, SOLID DECK OR BLOCKING, FACE NAIL	16d	16" O.C.
15	SOLE PLATE TO JOIST, SOLID DECK OR BLOCKING AT BRACED WALL PANELS	3-16d PER 16"	--
16	STUD TO SOLE PLATE, TOE NAIL	3-8d OR 2-16d	-- --
17	TOP OR SOLE PLATE TO STUD, END NAIL	2-16d	--
18	TOP PLATES, LAPS AT CORNER & INTERSECTIONS, FACE NAIL	2-10d	--
19	1" BRACE TO EACH STUD & PLATE, FACE NAIL	2-8d 2 STAPLES 1¾"	-- --
20	1"x6" SHEATHING TO EACH BEARING, FACE NAIL	2-8d 2 STAPLES 1¾"	-- --
21	1"x8" SHEATHING TO EACH BEARING, FACE NAIL	2-8d 3 STAPLES 1¾"	-- --
22	WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL	3-8d 4 STAPLES 1¾"	-- --
	FLOOR		
23	JOIST TO SILL OR GIRDER, TOE NAIL	3-8d	--
24	1x6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d 2 STAPLES 1¾"	-- --
25	2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d	--
26	RIM JOIST TO TOP PLATE, TOE NAIL (ROOF APPLICATIONS ALSO)	8d	6" O.C.
27	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	2-16d	AT EACH BEARING
28	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	10d	NAIL EACH LAYER: 32" O.C. AT TOP & BOTTOM, STAGGERED. TWO NAILS AT ENDS & EA. SPLICE.

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER[b, c, e]	SPACING OF FASTENER: EDGES (INCHES)[i]	SPACING OF FASTENER: INTERMEDIATE SUPPORTS[c, e] (INCHES)
	WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF & INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING			
30	⅜" - ½"	6d COMMON NAIL (SUBFLOOR WALL) 8d COMMON NAIL (ROOF)[f]	6	12[g]
31	19/32" - 1"	8d COMMON NAIL	6	12[g]
32	1⅛" - 1¼"	10d COMMON NAIL OR 8d DEFORMED NAIL	6	12
	OTHER WALL SHEATHING[h]			
33	½" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	½" GALV. ROOFING NAIL, 7/16" CROWN OR 1" CROWN STAPLE 16 GA., 1¼" LONG	3	6
34	25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1¾" GALV. ROOFING NAIL, 7/16" CROWN OR 1" CROWN STAPLE 16 GA., 1½" LONG	3	6
35	½" GYPSUM SHEATHING[d]	1½" GALV. ROOFING NAIL - STAPLE GALV., 1½" LONG - 1¼" SCREWS, TYPE W OR S	7	7
36	⅝" GYPSUM SHEATHING[d]	1¾" GALV. ROOFING NAIL - STAPLE GALV., 1⅝" LONG - 1⅝" SCREWS, TYPE W OR S	7	7
	WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
37	¾" AND LESS	6d DEFORMED NAIL OR 8d COMMON NAIL	6	12
38	⅞" - 1"	8d COMMON NAIL OR 8d DEFORMED NAIL	6	12
39	1⅛" - 1¼"	10d COMMON NAIL OR 8d DEFORMED NAIL	6	12

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MPH = 0.447 M/S - 1 ksi=6.895 MPa.

a. ALL NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING AND SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 80 ksi FOR SHANK DIAMETER OF 0.192" (20d COMMON NAIL), 90 ksi FOR SHANK DIAMETERS LARGER THAN 0.142" BUT NOT LARGER THAN 0.177", AND 100 ksi FOR SHANK DIAMETERS OF 0.142" OR LESS.
b. STAPLES ARE 16 GAUGE WIRE AND HAVE A MINIMUM 7/16" ON DIAMETER CROWN WIDTH.
c. NAILS SHALL BE SPACED AT NOT MORE THAN 6" O.C. AT ALL SUPPORTS WHERE SPANS ARE 48" OR GREATER.
d. FOUR-FOOT-BY-8-FOOT OR 4-FOOT-BY-9-FOOT PANELS SHALL BE APPLIED VERTICALLY.
e. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE 602.3(2).
f. FOR REGIONS HAVING BASIC WIND SPEED OF 110 MPH OR GREATER, 8d DEFORMED NAILS SHALL BE USED FOR ATTACHING PLYWOOD AND WOOD STRUCTURAL PANEL ROOF SHEATHING TO FRAMING WITHIN MINIMUM 48-INCH DISTANCE FROM GABLE END WALLS, IF MEAN ROOF HEIGHT IS MORE THAN 25', UP TO 35' MAXIMUM.
g. FOR REGIONS HAVING BASIC WIND SPEED OF LESS THAN 110 MPH, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FARMING SHALL BE SPACE 6" O.C. WHEN BASIC WINDOW SPEED IS GREAT THAN 100 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6" O.C. FOR MINIMUM 48" DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS, AND 4" O.C. TO GABLE END WALL FRAMING.
h. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 1396 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO ASTM C 208.
i. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS ONLY. SPACING OF FASTENERS ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS SHALL NOT BE REQUIRED EXCEPT AT INTERSECTION OF ADJACENT ROOF PLANES. FLOOR AND ROOF PERIMETER SHALL BE SUPPORTED BY FRAMING MEMBERS OR SOLID BLOCKING.
j. INTERIOR NON-BRACED WALL LINES MAY BE NAILED WITH A MINIMUM 4-10d NAILS.

TABLE R602.3(3) REQUIREMENTS FOR WOOD STRUCTURAL PANEL WALL SHEATHING USED TO RESIST WIND PRESSURES

MINIMUM NAIL: SIZE	MINIMUM NAIL: PENETRATION (INCHES)	MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (INCHES)	MAXIMUM WALL STUD SPACING (INCHES)	PANEL NAIL SPACING: EDGES (INCHES O.C.)	PANEL NAIL SPACING: FIELD (INCHES O.C.)	MAXIMUM WIND SPEED (mph), WIND EXPOSURE CATEGORY: B	C	D
6d COMMON	1.5	24/0	3/8	16	6	12	110	90	85
8d COMMON	1.75	24/16	7/16	16	6	12	130	110	105
				24	6	12	110	90	85

FOR SI: 1 INCH = 25.4 MM, 1 MPH = 0.447 M/S

a. PANEL STRENGTH AXIS PARALLEL OR PERPENDICULAR TO SUPPORTS. THREE-PLY PLYWOOD SHEATHING WITH STUDS SPACED MORE THAN 16" O.C. SHALL BE APPLIED WITH PANEL STRENGTH AXIS PERPENDICULAR TO SUPPORTS.
b. TABLE IS BASED ON WIND PRESSURES ACTING TOWARD AND AWAY FROM BUILDING SURFACES PER SECTION R301.2. LATERAL BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION R602.10.
c. WOOD STRUCTURAL PANELS WITH SPAN RATINGS OF WALL-16 OR WALL-24 SHALL BE PERMITTED AS AN ALTERNATE TO PANELS WITH A 24/0 SPAN RATING. PLYWOOD SIDING RATED 16oc OR 24oc SHALL BE PERMITTED AS AN ALTERNATE TO PANELS WITH A 24/16 SPAN RATING. WALL-16 AND PLYWOOD SIDING 16oc SHALL BE USED WITH STUDS SPACE A MAXIMUM OF 16" ON CENTER.

PRESCRIPTIVE PATH LEGEND

	METHOD OF BRACING	MIN. REQ'D SHEATHING	CONNECTION CRITERIA
W / 0	CS-WSP	3/8"	6d COMMON NAILS @ 6" O.C. AT PANEL EDGES & 12" O.C. AT INTERMEDIATE SUPPORTS
G / 0	CS-G	3/8"	6d COMMON NAILS @ 6" O.C. AT PANEL EDGES & 12" O.C. AT INTERMEDIATE SUPPORTS
P1 / 0	CS-PF	7/16"	SEE DETAIL 2/0 SEE PLAN FOR REQ'D STRAPS
P2 / 0	PFH	3/8"	SEE DETAIL 5/0 SEE PLAN FOR REQ'D HOLD-DOWNS
A / 0	ABW	3/8"	SEE DETAIL 1/0 SEE PLAN FOR REQ'D HOLD-DOWNS
GB / 0	GB	1/2" GYP. BD. BOTH SIDES OF WALL	NAILS OR SCREWS[a] @ 7" O.C. AT EDGES

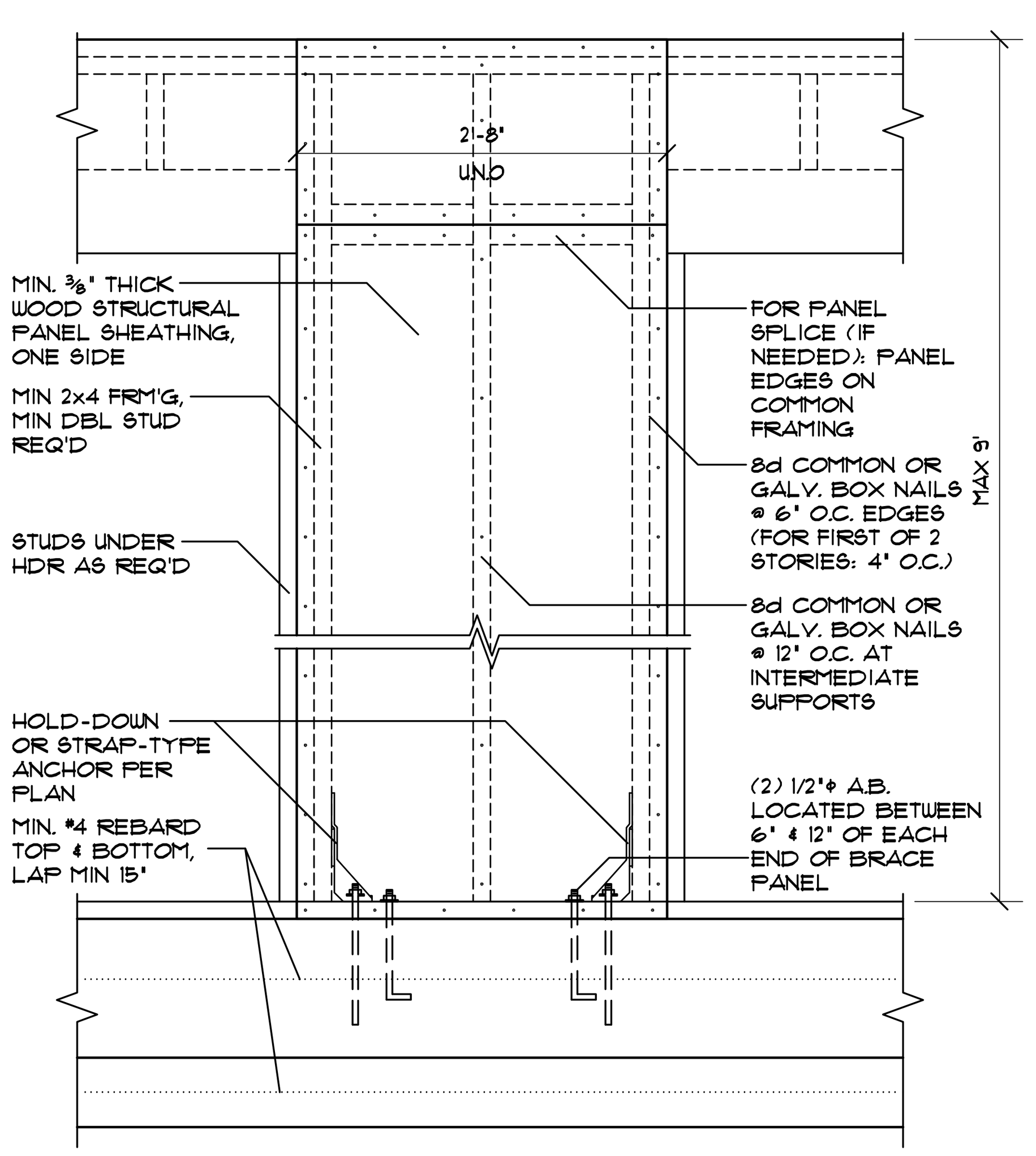
a. NAILS:
13 GAGE, 1¾" LONG, 19/64" HEAD OR
0.098" DIAMETER, 1¼" LONG, ANNULAR-RINGED OR
5d COOLER NAIL, 0.086" DIAMETER, 15/64" HEAD OR
GYP BD NAIL, 0.086" DIAMETER, 1⅝" LONG, 9/32" HEAD
SCREWS:
SCREWS SHALL BE TYPE S OR W AND PENETRATE INTO WOOD FRAMING MIN ⅝".

TABLE R602.10
INTERMITTENT WALL BRACING METHODS

LIB	LET IN BRACING
DWB	DIAGONAL WOOD BOARDS
WSP	WOOD STRUCTURAL PANELS
SFB	STRUCTURAL FIBERBOARD SHEATHING
GB	GYPSUM BOARD
PBS	PARTICLEBOARD SHEATHING
PCP	PORTLAND CEMENT PLASTER
HPS	HARDBOARD PANEL SIDING
ABW	ALTERNATE BRACED WALL
PFH	INTERMITTENT PORTAL FRAME
PFG	INTERMITTENT PORTAL FRAME AT GARAGE

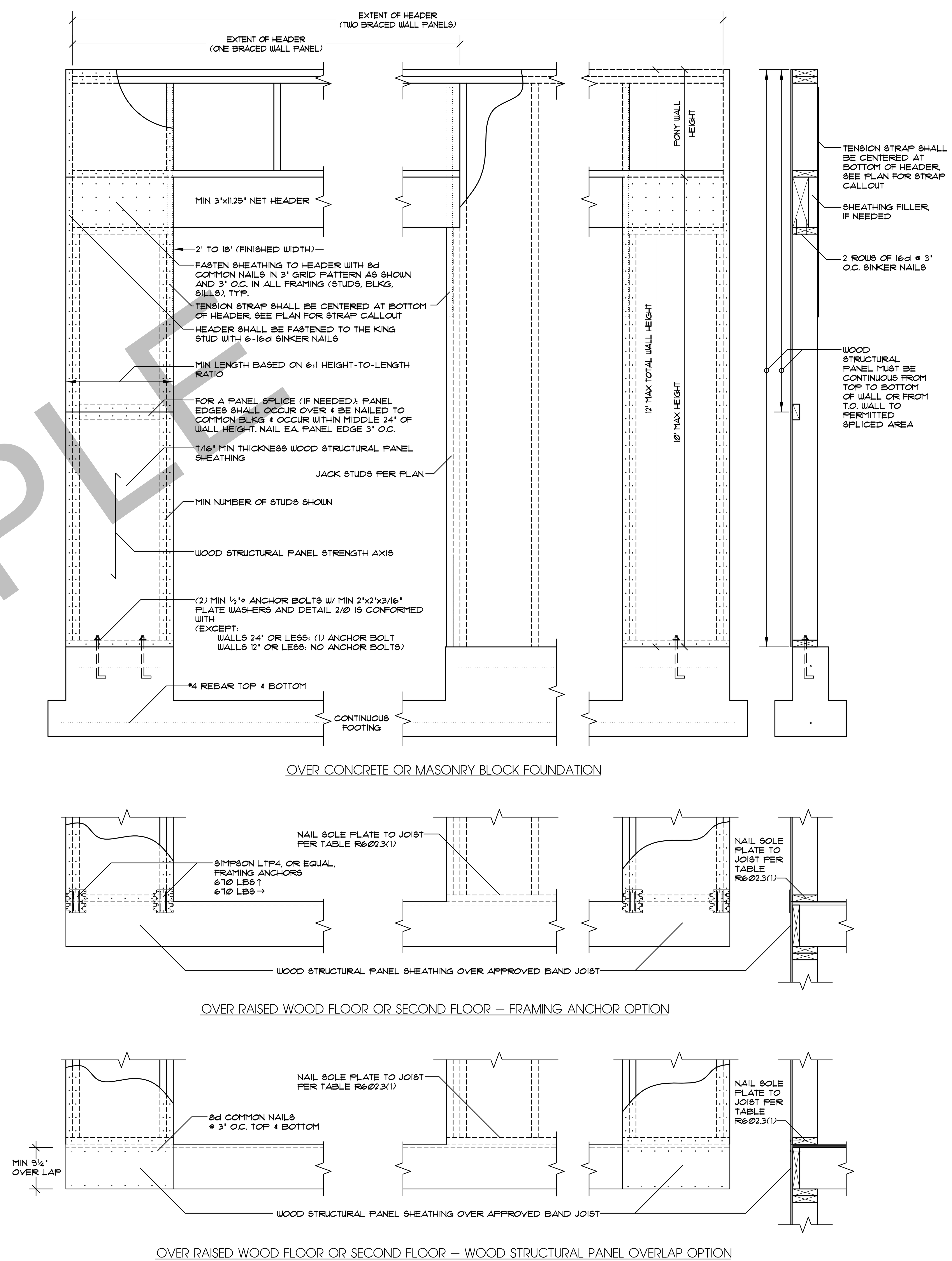
TABLE R602.10.4.1
CONTINUOUS SHEATHING METHODS

CS-WP	WOOD STRUCTURAL PANELS
CS-G	WSP NEXT TO GARAGE DOOR OPENING
CS-PF	CONTINUOUS PORTAL FRAME



DET 1 | 0 — ALT. BRACED WALL PANEL

SCALE: NTS — FIGURE R602.10.3.2



DET 2 | 0 — CONTINUOUS PORTAL FRAME CONSTRUCTION

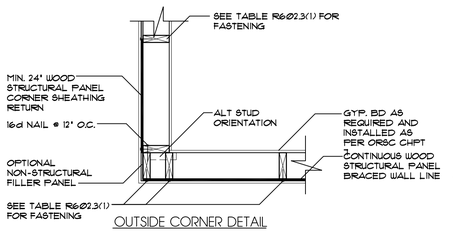
SCALE: NTS — FIGURE R602.10.4.1.1

PRESCRIPTIVE WALL BRACING
LATERAL DETAILS

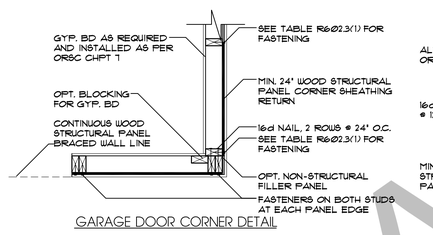
SUNTEL DESIGN
16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
(503) 624 0555

PLAN NR:
SHEET DESCRIP: DETAILS
JOB NAME: PRES PATH
DATE: 09/11
REV:
SHEET NR: 0a

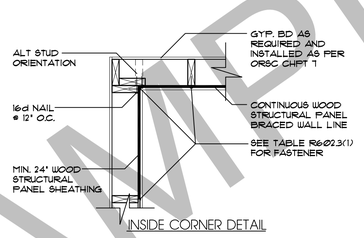
A NORTHWEST DESIGN



OUTSIDE CORNER DETAIL



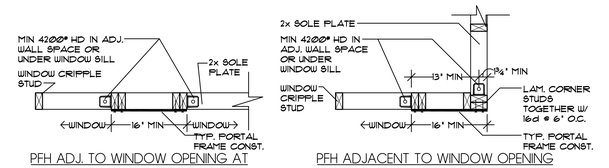
GARAGE DOOR CORNER DETAIL



INSIDE CORNER DETAIL

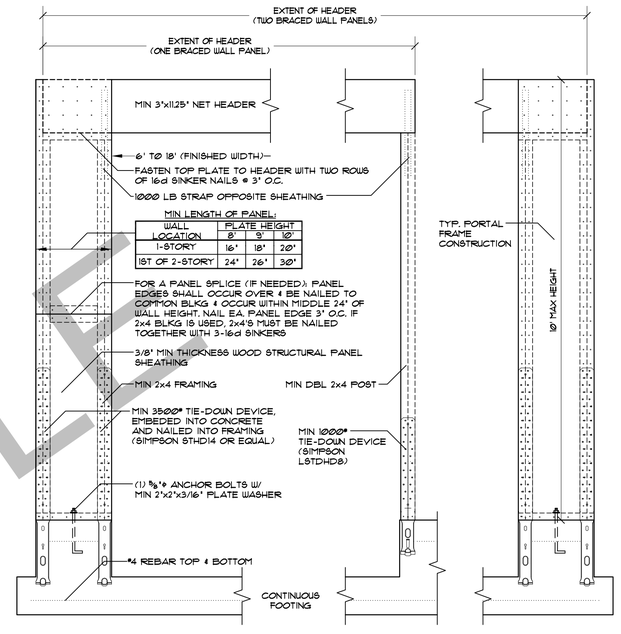
DET 3 0 CORNER FRM'G FOR CONTINUOUS SHEATHING

SCALE: 3/4" = 1'-0" FIGURE R602.10.4.4(1)



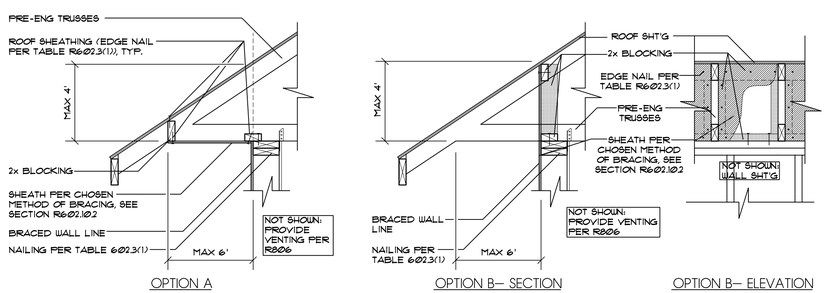
PFH ADJ. TO WINDOW OPENING AT INTERIOR CONDITION

PFH ADJACENT TO WINDOW OPENING AT CORNER



DET 5 0 PFH: PORTAL FRAME WITH HOLDDOWNS

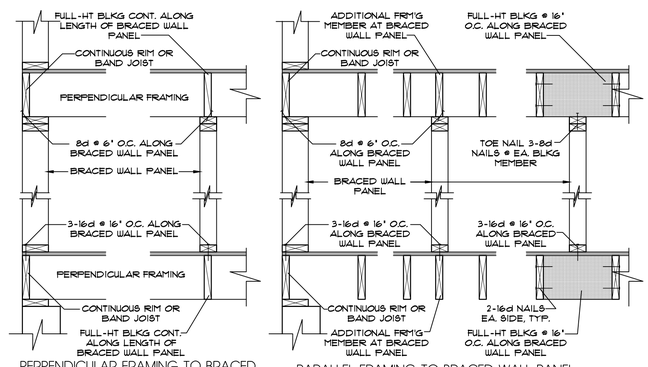
SCALE: NTS FIGURE R602.10.3.3



OPTION A OPTION B— SECTION OPTION B— ELEVATION

DET 4 0 WALL TO ROOF CONNECTION

SCALE: NTS FIGURE R602.10.6.2(2) & (3)



PERPENDICULAR FRAMING TO BRACED WALL PANEL

PARALLEL FRAMING TO BRACED WALL PANEL

DET 6 0 BRACED WALL PANEL AT FLOOR/CLG FRM'G

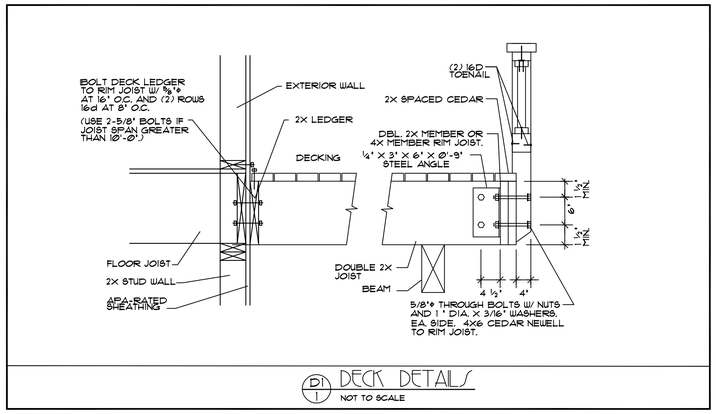
SCALE: NTS FIGURE R602.10.4.6(1) & (2)

PRESCRIPTIVE WALL BRACING LATERAL DETAILS

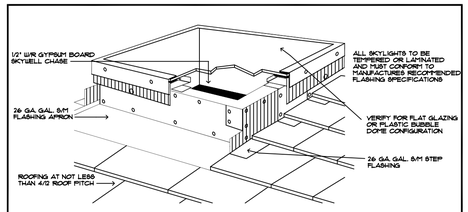
16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
(503) 624 0555

PLAN NR:
SHEET DESCRIP: DETAILS
JOB NAME: PRES PATH
DATE: 09/11
REV:
SHEET NR: 06

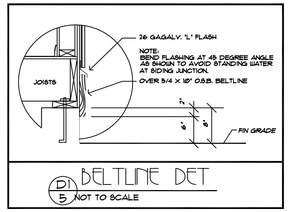
A NORTHWEST DESIGN



D1 1 DECK DETAILS
NOT TO SCALE



D1 2 TYPICAL SKYLIGHT DETAIL
NOT TO SCALE



D1 5 BELTLINE DET
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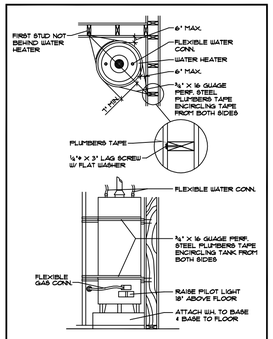
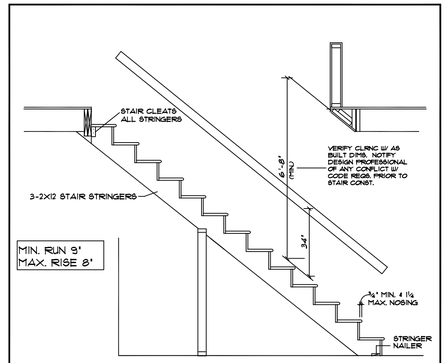


CORNER WATER HEATER DETAIL
D1 3 NOT TO SCALE



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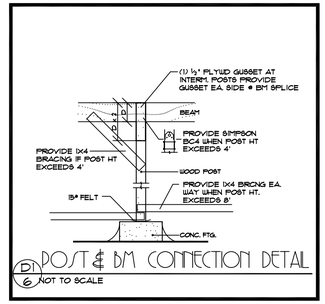
NOT TO SCALE



D1 6 POST & BM CONNECTION DETAIL
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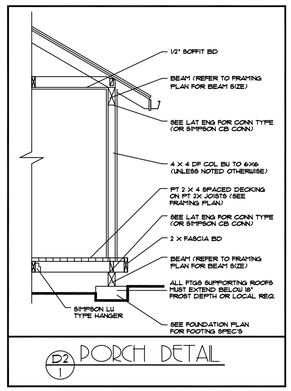
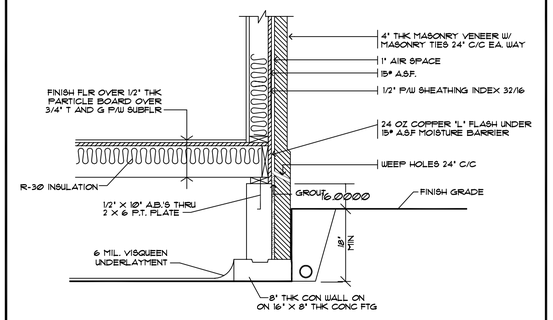
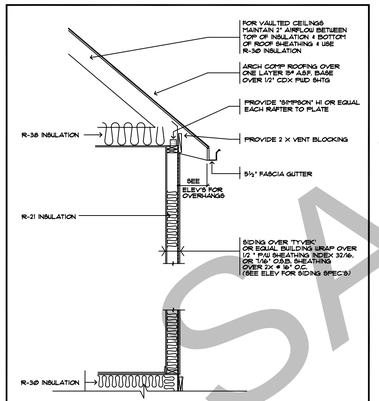


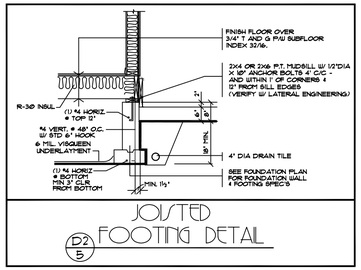
D2 1 PORCH DETAIL



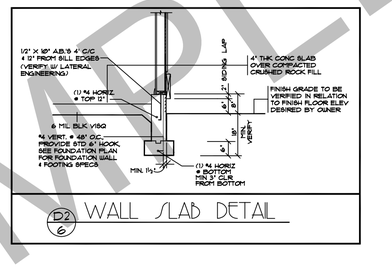
MASONRY VENEER WALL DETAIL
D2 2



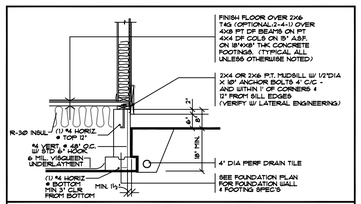
D2 4 TYPICAL WALL DETAIL PATH 1 ENERGY CODE



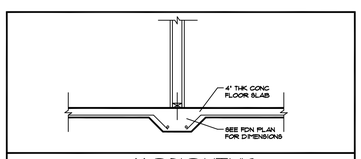
D2 5 JOISTED FOOTING DETAIL



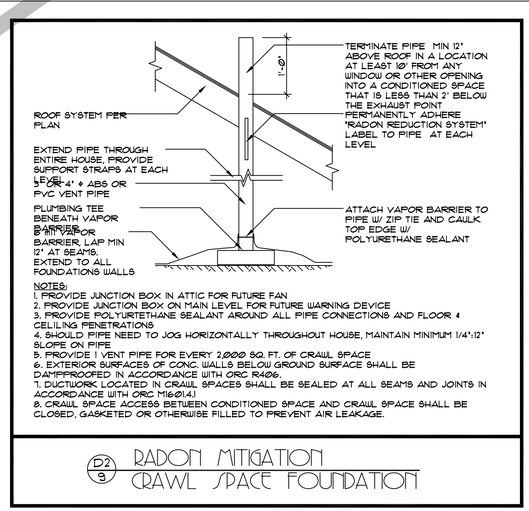
D2 6 WALL SLAB DETAIL



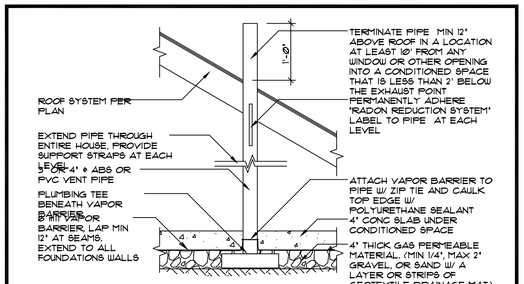
D2 7 POST & BEAM FOOTING DETAIL



D2 8 MONOLITHIC FOOTING DETAIL



RADON MITIGATION CRAWL SPACE FOUNDATION
D2 9



RADON MITIGATION SLAB ON GRADE FOUNDATION
D2 10

DETAIL SHEET

16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
(503) 624 0555

PLAN NR:
SHEET DESCRIP: DETAILS
JOB NAME:
DATE: 7/08
REV:
SHEET NR: D1/D2

A NORTHWEST DESIGN

GENERAL NOTES

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE ORSC CODE AND ANY APPLICABLE STATE, COUNTY OR LOCAL REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE TO CHECK THE PLANS AND IS TO NOTIFY THE DESIGNER OF ANY ERRORS OR OMISSIONS PRIOR TO THE START OF CONSTRUCTION.
3. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.
4. DESIGN LOADS:
   - ROOF 25 PSF (LIVE LOAD)
   - FLOOR 40 PSF (LIVE LOAD)
   - STAIRS 100 PSF
   - GARAGE FLOOR 125 PSF (2000# PT)
   - DECKS 75 PSF

   (IF YOUR LOCAL AREA REQUIRES DIFFERENT DESIGN LOADS, CONSULT WITH A LOCAL STRUCTURAL ENGINEER TO DETERMINE THE APPROPRIATE REVISIONS.)
5. PROVIDE INSULATION BAFFLES AT EAVE VENTS BETWEEN RAFTERS.
6. ALL SMOKE DETECTORS SHALL BE POWERED BY 110V CURRENT, CONNECTED TO HOUSE ELECTRICAL SYSTEM. INTERCONNECT WITH EACH ONE SO THAT IF ANY ONE TRIPS THEY WILL ALL SOUND. THEY SHALL ALSO HAVE A BATTERY BACKUP AND BE LOCATED IN EACH BEDROOM AND ON EACH FLOOR LEVEL.
7. GUARDRAILS SHALL HAVE INTERMEDIATE RAILS SPACED SUCH THAT A SPHERE 5" IN DIA. CANNOT PASS THROUGH
8. PROVIDE GROUNDING ELECTRODE AT ELECTRICAL SERVICE CONSISTING OF A MINIMUM 20' LENGTH OF ½"φ STEEL REINFORCEMENT OF FOOTINGS. ELECTRODE SHALL EXTEND 12" MIN. ABOVE THE PLATE LINE.
9. THE MAXIMUM AMOUNT OF WATER USED BY NEW PLUMBING FIXTURES:
   - TOILETS 1.6 GALLONS/FLUSH
   - SHOWER HEADS 2.5 GALLONS/MINUTE
   - INTERIOR FAUCETS 2.5 GALLONS/MINUTE
10. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE MORE STRINGENT PROVISIONS SHALL GOVERN.
11. STRUCTURAL SPECIFICATONS AND DRAWINGS FOR THIS WORK HAVE BEEN PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICE TO MEET MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE ORSC.
12. SPECIFICATIONS AND DRAWINGS INDICATE FINISHED STRUCTURE. BUILDER SHALL BE RESPONSIBLE FOR CONSTRUCTION METHODS, PROCEDURES, AND CONDITIONS (INCLUDING SAFETY), EXCEPT AS SPECIFICALLY INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS
13. CONSTRUCTION LOADS SHALL NOT OVERLOAD STRUCTURE NOR SHALL THEY BE IN EXCESS OF DESIGN LOADINGS INDICATED ON DRAWINGS.
14. BUILDER SHALL VERIFY ALL MATERIALS, DIMENSIONS, AND CONDITIONS SHOWN ON STRUCTURAL DRAWINGS OR NOTED IN STRUCTURAL SPECIFICATIONS. ANY VARIANCES WITHIN STRUCTURAL DRAWINGS AND SPECIFICATIONS, OR WITHIN CONDITIONS ENCOUNTERED AT JOB SITE, SHALL BE REPORTED TO OWNER IN WRITING BEFORE COMMENCEMENT OF ANY WORK EFFECTED BY SUCH VARIANCE.
15. BUILDER SHALL RIGIDLY ADHERE TO ALL LAWS, CODES, AND ORDINANCES WHICH APPLY TO THIS WORK. HE SHALL NOTIFY AND RECEIVE CLARIFICATION FROM OWNER IN WRITING OF ANY VARIATIONS BETWEEN CONTRACT DOCUMENTS AND GOVERNING REGULATIONS.
16. ALL MANUFACTURED MATERIALS, COMPONENTS, FASTENERS, ASSEMBLIES, ETC., SHALL BE HANDLED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PROVISIONS OF APPLICABLE ICBO RESEARCH RECOMMENDATIONS. WHERE SPECIFIC MANUFACTURED PRODUCTS ARE CALLED FOR, GENERIC EQUALS WHICH MEET APPLICABLE STANDARDS AND SPECIFICATONS MAY BE USED.
17. NO VARIANCE BY A BUILDING OFFICIAL SHALL BE BINDING ON DESIGNERS.
18. BUILDER SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESS POOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH ITEMS ARE FOUND, OWNER SHALL BE NOTIFIED IMMEDIATELY.
19. CARBON MONOXIDE DETECTORS SHALL BE PROIVDED IN ANY HOME WITH A GAS APPLIANCE. ONE SHALL BE LOCATED WITHIN EACH BEDROOM OR WITHIN 15' OR OF EACH BEDROOM DOOR. BEDROOMS ON SEPARATE FLOORS REQUIRE SEPARATE DETECTORS.

FOUNDATION NOTES

1. FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL DEVOID OF ANY ORGANIC MATERIAL AND STEPPED AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRADE.
2. SOIL BEARING PRESSURE ASSUMED TO BE 1500 PSF.
3. ANY FILL UNDER GRADE SUPPORTED SLABS TO BE A MINIMUM OF 4" GRANULAR MATERIAL COMPACTED TO 95%.
4. CONCRETE TO DEVELOP A MIN. OF 3000 PSI AT 28 DAYS WITH A MIN. OF 6 SACKS OF CEMENT PER YARD AND A MAXIMUM SLUMP OF 4".
5. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' (MAXIMUM) INTERVALS EA. WAY.
6. CONCRETE SIDEWALKS TO HAVE 3/4" TOOLED JOINTS AT 5' O.C. (MINIMUM)
7. REINFORCING STEEL TO BE A-615 GRADE 40. WELDED WIRE MESH TO BE A-185.
8. EXCAVATE THE SITE TO PROVIDE A MINIMUM OF 18" CLEARANCE UNDER ALL GIRDERS.
9. COVER ENTIRE CRAWLSPACE WITH 6 MIL BLACK 'VISQUEEN' AND EXTEND UP FDTN. WALLS TO P.T. MUDSILL.
10. PROVIDE A MINIMUM OF 1 SQ FT OF VENTILATION AREA FOR EACH 150 SQ FT OF CRAWLSPACE AREA. VENTS ARE TO BE CLOSABLE WITH 1/4" OPENINGS IN CORROSIVE RESISTANT SCREEN.
11. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 30# ROLL ROOFING.
12. BEAM POCKETS IN CONCRETE TO HAVE 1/2" AIRSPACE AT SIDES AND ENDS WITH A MINIMUM BEARING OF 3".
13. PROVIDE CRAWLSPACE DRAIN AS PER SEC. R405.1 OF ORSC
14. THE GRADE AWAY FROM FND WALLS SHALL FALL 6" MIN. WITHIN FIRST 10'.
15. SLOPE FOR PERMANENT FILLS AND CUT SLOPES SHALL NOT EXCEED 2 UNITS HORIZ. TO 1 UNIT VERT.
16. BACKFILL SHALL NOT BE PLACED UNTIL WALL HAS SUFFICIENT STRENGTH AND HAS BEEN ANCHORED TO FLOOR ABOVE ON WALLS W/ MORE THAN 4' UNBALANCED BACKFILL.
17. BUILDER SHALL BE RESPONSIBLE FOR SUPPORT OF ALL TEMPORARY EMBANKMENTS AND EXCAVATIONS.
18. FOOTINGS SHALL BE FOUNDED ON FIRM, UNDISTURBED, NATIVE, FREE DRAINING SOILS. CONDITIONS FOUND TO BE OTHERWISE SHALL BE REPORTED TO OWNER.
19. ALL GROUND OVER WHICH FOOTINGS AND SLABS-ON-GRADE ARE TO BE PLACED SHALL BE FREE OF EXPANSIVE OR COMPRESSIBLE DEBRIS AND ORGANIC MATERIAL.
20. FOOTINGS AND SLABS-ON-GRADE CONCRETE SHALL NOT BE PLACED ON MUDDY OR FROZEN GROUND. SUB-GRADE FOR SLABS-ON-GRADE WHERE VAPOR BARRIER IS NOT REQUIRED SHALL BE DAMP AT TIME OF CONCRETE PLACEMENT.

FRAMING NOTES

1. ALL EXTERIOR WALL AND BEARING WALL OPENINGS TO HAVE 4X12 HEADERS UNLESS OTHERWISE INDICATED
2. JOISTS THAT ARE ATTACHED TO FLUSH BEAMS ARE TO BE HUNG WITH 'SIMPSON' LU TYPE OR EQUIV.

2b. DOUBLE JOISTS THAT ARE ATTACHED TO FLUSH BMS ARE TO BE HUNG WITH 'SIMPSON' LUS TYPE OR EQUIV.

3. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS OVER.
4. PROVIDE FIREBLOCKING, DRAFTSTOPS & FIRESTOPS AS PER THE ORSC SEC R602.8
5. LUMBER SPECIES:
   - A. POSTS, BEAMS, HEADERS JOISTS AND RAFTERS — NO.2 DOUG FIR
   - B. SILLS, PLATES, BLOCKING BRIDGING, ETC. — NO.3 DOUG FIR
   - C. STUDS — STUD GRADE D.F.
   - D. POST AND BEAM DECKING — UTILITY GRADE D.F.
   - E. PLYWOOD SHEATHING — 1/2" CDX PLY, 32/16
   - F. GLU-LAM BEAMS — fb-2400, DRY ADH.
6. NAILING SCHEDULE SEE TABLE 602.3(1)
7. NOTCHES IN SOLID LUMBER JOISTS, RAFTERS, AND BEAMS SHALL NOT EXCEED ONE-SIXTH OF THE DEPTH OF THE MEMBER, SHALL NOT BE LONGER THAN ONE-THIRD OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN. NOTCHES AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER. THE TENSION SIDE OF MEMBERS 4" (102mm) OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT ENDS OF THE MEMBERS. THE DIAMETER OF HOLES BORED OR CUT INTO MEMBERS SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE CLOSER THAN 2" TO THE TOP OR BOTTOM OF THE MEMBER, OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2" (51mm) TO THE NOTCH.
8. STUDS IN AN EXTERIOR WALL OR LOAD-BEARING PARTITIONS SHALL BE PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS WIDTH. STUDS IN NON-LOAD-BEARING PARTITIONS SHALL BE PERMITTED TO BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. STUDS SHALL BE PERMITTED TO BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NO GREATER THAN 40% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO CLOSER THAN 5/8" (15.9mm) TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH.
9. INSTALL ALL HORIZONTAL MEMBERS WITH CROWN UP.
10. ALL MEMBERS IN BEARING SHALL BE ACCURATELY CUT AND ALIGNED SO THAT FULL BEARING IS PROVIDED WITHOUT USE OF SHIMS. BEARING POSTS SHALL HAVE FULL BLOCKING OR SUPPORT UNDER.
11. ALL JOISTS SHALL HAVE A MINIMUM OF 2" BEARING AT SUPPORTS. LAPPING JOISTS SHALL HAVE 6" LAPS CENTERED OVER INTERIOR SUPPORTS.
12. LEDGERS AND STUD WALL FOUNDATION SILL PLATES SHALL BE BOLTED TO CONCRETE W/ ANCHOR BOLTS OF SIZE AND MINIMUM SPACING AS SHOWN ON DRAWINGS. AT LEAST TWO BOLTS SHALL BE PROVIDED FOR EACH PIECE W/ ONE BOLT WITHIN 12" OF EACH END.
13. ALL PLYWOOD WALL SHEATHING SHALL BE APPLIED AS FOLLOWS: CENTER VERTICAL JOINTS OVER STUDS AND CENTER HORIZONTAL JOINT OVER 2" BLOCKING OR PLATE. NAIL TOP OF PANELS TO DOUBLE TOP PLATE, AND NAIL BOTTOM OF PANELS TO ANCHORED SILL PLATE. APPLY GYPSUM BOARD SO THAT END JOINTS OF ADJACENT COURSE DO NOT OCCUR AT THE SAME STUD.

INSULATION SPECIFICATIONS

1. ALL EXPOSED INSULATION IS TO HAVE A FLAME SPREAD RATING OF LESS THAN 25 & A SMOKE DENSITY RATING OF LESS THAN 450.
2. PERIMETER CONC. WALLS TO BE PROTECTED W/ RIGID FIBERBOARD INSULATION FROM TOP OF CONC WALL TO NOT LESS THAN 24" BELOW GRADE.
3. SLAB EDGE INSULATION IS TO BE R-15.
4. HEATING DUCTS TO BE INSULATED W/ R-8
5. WINDOWS SHALL MEET REQUIRED U FACTORS FOR THE CONTRACTORS CHOSEN PATH OF COMPLIANCE SEE TABLE N1104.1(1)
6. ONE EXTERIOR DOOR MAY BE INSULATED TO A U-FACTOR OF 0.20. ALL OTHER EXTERIOR DOORS MAY NOT EXCEED 0.54.

TRUSS NOTE

SUBMIT TRUSS DESIGN FOR ENGINEERING PRIOR TO FABRICATION & VERIFY LOCATION OF GIRDER TRUSSES W/ TRUSS COMPANY PRIOR TO FORMING FOUNDATION WALLS AS TO PROVIDE FOR ADDITIONAL LOADING FROM VARYING TRUSS DESIGN.

VERIFY ALL TRUSS SPANS & CONFIGURATIONS ON JOB SITE PRIOR TO FABRICATION.

TABLE 602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

DESCRIPTION OF BUILDING ELEMENTS	NO. & TYPE OF FASTENER [a,b,c,d]	SPACING OF FASTENERS
JOIST TO SILL OR GIRDER, TOE NAIL	3-8d	—
1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-8d 2 STAPLES, 1¾"	— —
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d	—
SOLE PLATE TO JOIST, SOLID DECK, OR BLOCKING , FACE NAIL	16d	16" O.C.
TOP OR SOLE PLATE TO STUD, END NAIL	2-16d	—
STUD TO SOLE PLATE, TOE NAIL	3-8d OR 2-16d	—
DOUBLE STUDS, FACE NAIL	10d	24" O.C.
DOUBLE TOP PLATES, FACE NAIL	10d	24" O.C.
SOLE PLATE TO JOIST, SOLID DECK, OR BLKG AT BRACED WALL PANELS	3-16d per 16"	—
DBL TOP PLATES, MIN. 48" OFFSET OF END JOINTS, FACE NAIL IN LAPPED AREA	8-16d	—
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOE NAIL	3-8d	—
RIM JOIST TO TOP PLATE, TOE NAIL	8d	6" O.C.
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS, FACE NAIL	2-10d	—
BUILT-UP HEADER, TWO PIECES WITH ½" SPACER	16d	16" O.C. ALONG EA EDGE
CONTINUED HEADER, TWO PIECES	16d	16" O.C. ALONG EA EDGE
CIELING JOISTS TO PLATE, TOE NAIL	3-8d	—
CONTINUOUS HEADER TO STUD, TOE NAIL	4-8d	—
CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL	3-10d	—
CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3-10d	—
RAFTER TO PLATE, TOE NAIL	2-16d	—
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d 2 STAPLES, 1¾"	— —
BUILT-UP CORNER STUDS	10d	24" O.C.
BUILT-UP GIRDERS AND BEAMS, 2-INCH LUMBER LAYERS	10d	NAIL EACH LAYER AS FOLLOWS: 32" O.C. @ TOP & BOTTOM, STAGGERED TWO NAILS AT ENDS AND AT EACH SPLICE.
2" PLANKS	2-16d	AT EACH BEARING
ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS: TOE NAIL FACE NAIL	 4-16d 3-16d	 — —
RAFTER TIES TO RAFTERS, FACE	3-8d	—

DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER [b,c,d,e]	SPACING OF FASTENERS: EDGES (IN.)[i]	SPACING OF FASTENERS: INTERMEDIATE SUPPORTS[c,e] (IN.)
PLYWOOD AND WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND WALL SHEATHING TO FRAMING, AND PARTICLEBOARD WALL SHEATHING TO FRAMING			
5/16"-1/2"	6d COMMON NAIL (SUBFLOOR, WALL) 8d COMMON NAIL (ROOF)	6	12[g]
19/32"-1"	8d COMMON NAIL	6	12[g]
1 1/8"-1 1/4"	10d COM NAIL OR 8d DEFRMD NAIL	6	12
OTHER WALL SHEATHING[h]			
1/2" REGULAR CELLULOSIC FIBERBOARD SHEATHING	1½" GALVANIZED ROOFING NAIL, 6d COM NAIL, STAPLE 16 GA., 1½" LONG	3	6
1/2" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1½" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE 16 GA., 1½" LONG	3	6
25/32" STRUCTURAL CELLULOSIC FIBERBOARD SHEATHING	1¾" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE 16 GA., 1¾" LONG	3	6
1/2" GYPSUM SHEATHING	1½" GALVANIZED ROOFING NAIL, 6d COM NAIL, STAPLE GALVANIZED, 1½" LONG, 1¼" SCREWS, TYPE W OR S	4	8
5/8" GYPSUM SHEATHING	1¾" GALVANIZED ROOFING NAIL, 8d COM NAIL, STAPLE GALVANIZED, 1⅝" LONG, 1⅝" SCREWS, TYPE W OR S	4	8
PLYWOOD AND WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING			
3/4" AND LESS	6d DEFORMED NAIL OR 8d COM NAIL	6	12
7/8"-1"	8d COM NAIL OR 8d DEFORMED NAIL	6	12
1 1/8"-1 1/4"	10d COM NAIL OR 8d DEFORMED NAIL	6	12

FOR SI: 1 INCH = 25.4 MM, 1 FOOT = 304.8 MM, 1 MPH = 1.609 KM/H.

a. ALL NAILS ARE SMOOTH-COMMON, BOX OR DEFORMED SHANKS EXCEPT WHERE OTHERWISE STATED. NAILS USED FOR FRAMING ANS SHEATHING CONNECTIONS SHALL HAVE MINIMUM AVERAGE BENDING YIELD STRENGTHS AS SHOWN: 80 ksi (551 MPa) FOR SHANK DIAMETER OF 0.192" (20d COMMON NAIL), 90 ksi (620 MPa) FOR SHANK DIAMETERS LARGER THAN 0.142" BUT NOT LARGER THAN 0.177", AND 100 ksi (689 MPa) FOR SHANK DIAMETERS OF 0.142" OR LESS.
b. STAPLES ARE 16 GUAGE WIRE AND HAVE A MINIMUM 7/16-INCH O.D. CROWN WIDTH.
c. NAILS SHALL BE SPACED AT NOT MORE THAN 6 INCHES O.C. AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR GREATER.
d. FOUR-FOOT-BY-8-FOOT OR 4-FOOT-BY-9-FOOT PANELS SHALL BE APPLIED VERTICALLY.
e. SPACING OF FASTENERS NOT INCLUDED IN THIS TABLE SHALL BE BASED ON TABLE 602.3(2).
f. FOR REGIONS HAVING BASIC WIND SPEED OF 110 MPH OR GREATER, 8d DEFORMED NAILS SHALL BE USED FOR ATTACHING PLYWOOD AND WOOD STRUCTURAL PANEL ROOF SHEATHING TO FRAMING WITHIN MINIMUM 48-INCH DISTANCE FROM GABLE END WALLS, IF MEAN ROOF HEIGHT IS MORE THAN 25', UP TO 35' MAXIMUM.
g. FOR REGIONS HAVING BASIC WIND SPEED OF LESS THAN 110 MPH, NAILS FOR ATTACHING WOOD STRUCTURAL PANEL ROOF SHEATHING TO GABLE END WALL FRAMING SHALL BE SPACED 6" O.C. WHEN BASIC WIND SPEED IS GREATER THAN 100 MPH, NAILS FOR ATTACHING PANEL ROOF SHEATHING TO INTERMEDIATE SUPPORTS SHALL BE SPACED 6" O.C. FOR MINIMUM 48" DISTANCE FROM RIDGES, EAVES AND GABLE END WALLS, AND 4" O.C. TO GABLE END WALL FRAMING.
h. GYPSUM SHEATHING SHALL CONFORM TO ASTM C 79 AND SHALL BE INSTALLED IN ACCORDANCE WITH GA 253. FIBERBOARD SHEATHING SHALL CONFORM TO EITHER AHA 194.1 OR ASTM C 208.
i. SPACING OF FASTENERS ON FLOOR SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS ONLY. SPACING OF FASTENERES ON ROOF SHEATHING PANEL EDGES APPLIES TO PANEL EDGES SUPPORTED BY FRAMING MEMBERS AND AT ALL ROOF PLANE PERIMETERS. BLOCKING OF ROOF OR FLOOR SHEATHING PANEL EDGES PERPENDICULAR TO THE FRAMING MEMBERS SHALL NOT BE REQUIRED EXCEPT AT INTERSECTION OF ADJACENT ROOF PLANES. FLOOR AND ROOF PERIMETER SHALL BE SUPPORTED BY FRAMING MEMBERS OR SOLID BLOCKING.
j. INTERIOR NON-BRACED WALL LINES MAY BE NAILED WITH A MINIMUM 4-10d NAILS.

ELECTRICAL REQUIREMENTS*

LIGHTING REQUIREMENTS:
AT LEAST ONE WALL SWITCH-CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED IN EVERY HABITABLE ROOM AND IN BATHROOMS, HALLWAYS, STAIRWAYS, ATTACHED GARAGES, DETACHED GARAGES PROVIDED WITH ELECTRICAL POWER AND AT THE EXTERIOR SIDE OF EGRESS DOORS.

STAIRWAY LIGHTING CONTROL:
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS OF ILLUMINATION TO THE STAIR, INCLUDING THE LANDINGS AND TREADS, TO BE CONTROLLED BY A WALL SWITCH AT EACH FLOOR LEVEL. INTERIOR STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING AT THE TOP AND BOTTOM OF THE STAIR. EXTERIOR STAIRS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIR. EXCEPTION: WHERE THE DIFFERENCE BETWEEN FLOOR LEVELS REQUIRES LESS THAN 6 STAIR RISERS.

FIXTURES IN CLOTHES CLOSETS:
SURFACE MOUNTED FLUORESCENT FIXTURES SHALL BE INSTALLED ON THE WALL ABOVE THE DOOR OR ON THE CEILING, PROVIDED THERE IS A MINIMUM CLEARANCE OF 6" BETWEEN THE FIXTURE AND THE NEAREST POINT OF A STORAGE SPACE.

WET OR DAMP LOCATIONS:
FIXTURES INSTALLED IN WET OR DAMP LOCATIONS SHALL BE INSTALLED SO THAT WATER CANNOT ENTER OR ACCUMULATE IN WIRING COMPARTMENTS, LAMPHOLDERS OR OTHER ELECTRICAL PARTS. ALL FIXTURES INSTALLED IN WET LOCATIONS SHALL BE MARKED 'SUITABLE FOR WET LOCATIONS'. ALL FIXTURES INSTALLED IN DAMP LOCATIONS SHALL BE MARKED 'SUITABLE FOR WET LOCATIONS' OR 'SUITABLE FOR DAMP LOCATIONS'

LIGHT SWITCH ACCESS:
ALL SWITCHES SHALL BE LOCATED TO ALLOW OPERATION FROM A READILY ACCESSIBLE LOCATION.

RECEPTACLE OUTLET REQUIREMENTS:
IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, DEN, BEDROOM, OR SIMILAR ROOM OR AREA OF DWELLING UNITS, RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE THAT IS 2 FEET OR MORE IN WIDTH.

KITCHENS:
RECEPTACLE OUTLETS, WITH GFI PROTECTION, SHALL BE INSTALLED EVERY 24" ON ALL COUNTER SPACES THAT MEASURE 12" OR WIDER

BATHROOMS:
AT LEAST ONE WALL RECEPTACLE OUTLET, WITH GFI PROTECTION, SHALL BE INSTALLED IN BATHROOMS ADJACENT TO EACH BASIN LOCATION.

OUTDOORS:
AT LEAST ONE RECEPTACLE OUTLET, WITH GFI PROTECTION, SHALL BE INSTALLED OUTDOORS AT THE FRONT AND BACK OF EACH DWELLING UNIT HAVING DIRECT ACCESS TO GRADE.

HALLWAYS:
HALLWAYS OF 10 FEET OR MORE IN LENGTH SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET.

HVAC OUTLET:
A CONVENIENCE RECEPTACLE OUTLET SHALL BE INSTALLED FOR THE SERVICING OF HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT LOCATED IN ATTICS AND CRAWL SPACES.

WET LOCATIONS:
A RECEPTACLE INSTALLED IN A WET LOCATION SHALL BE IN A WEATHER PROOF ENCLOSURE, THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN THE ATTACHMENT PLUG CAP IS INSERTED.

*ADDITIONAL INFORMATION CAN BE FOUND IN THE OREGON RESIDENTIAL SPECIALTY CODE BOOK IN SECTIONS:

E37-404 SWITCHES
E37-406 RECEPTACLE OUTLETS
E37-410 LIGHTING OUTLETS

HIGH-EFFICIENCY INTERIOR LIGHTING SYSTEM:
A MINIMUM OF 50% OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE COMPACT OR LINEAR FLOURESCENT, OR A LIGHTING SOURCE THAT HAS A MINIMUM EFFICANCY OF 40 LUMENS PER INPUT WATT. SCREW-IN COMPACT FLOURESCENT LAMPS COMPLY WITH THIS REQUIREMENT.

TABLE 1101.1(2) ADDITIONAL MEASURES (select one)[a]

	MEASURE
1	HIGH EFFICIENCY HVAC SYSTEM: GAS-FIRED FURNACE OR BOILER WITH MINIMUM AFUE OF 90%[a] OR AIR-SOURCE HEAT PUMP WITH MINIMUM HSPF OF 8.5 OR CLOSED-LOOP GROUND SOURCE HEAT PUMP WITH MINIMUM COP OF 3.0
2	HIGH EFFICIENCY DUCT SEALING: CERTIFIED PERFORMANCE TESTED DUCT SYSTEMS[b] OR ALL DUCTS AND AIR HANDLER ARE CONTAINED WITHIN BUILDING ENVELOPE[a]
3	HIGH EFFICIENCY BUILDING ENVELOPE: REPLACE CORRESPONDING TABLE N1101.1(1) COMPONENTS WITH ALL OF THE FOLLOWING: WALL INSULATION-ABOVE GRADE - U-0.047/R-24, AND VAULTED CEILINGS - U-0.033/R-30A[c,d], AND FLAT CEILINGS - U-0.025/R-49 AND, WINDOWS - U-0.32
4	ZONAL ELECTRIC, DUCTLESS FURNACE OR DUCTLESS HEAT PUMPS: 75 PERCENT PF PERMANENTLY INSTALLED LIGHTING FIXTURES AS CFL OR LINEAR FLUORESCENT OR A MIN EFFICACY OF 40 LUMENS PER WATT, OR WINDOWS - U-0.32 OR, FLAT CEILINGS - U-0.025/R-49 AND VAULTED CEILINGS - U-0.033/R-30A OR, EXTERIOR WALLS - U-0.047/R-24
5	HIGH EFFICIENCY CEILINGS & WINDOWS/LIGHTING: REPLACE CORRESPONDING TABLE N1101.1(1) COMPONENTS WITH ALL OF THE FOLLOWING: VAULTED CEILINGS - U-0.033/R-30A[c,d], AND FLAT CEILINGS - U-0.025/R-49, AND WINDOWS - U-0.32, AND 75 PERCENT OF PERMANENTLY INSTALLED LIGHTING FIXTURES AS CFL OR LINEAR FLUORESCENT OR A MIN EFFICACY OF 40 LUMENS PER WATT
6	HIGH EFFICIENCY CEILINGS & WINDOWS/WATER HEATING: REPLACE CORRESPONDING TABLE N1101.1(1) COMPONENTS WITH ALL OF THE FOLLOWING: VAULTED CEILINGS - U-0.033/R-30A[c,d], AND FLAT CEILINGS - U-0.025/R-49, AND WINDOWS - U-0.32, AND NATURAL GAS/PROPANE, ON-DEMAND WATER HEATING WITH MIN EF OF 0.80
7	HIGH EFFICIENCY WATER HEATING/LIGHTING: NATURAL GAS/PROPANE, ON-DEMAND WATER HEATING WITH MIN EF OF 0.80 75 PERCENT OF PERMANENTLY INSTALLED LIGHTING FIXTURES AS CFL OR LINEAR FLUORESCENT OR A MIN EFFICACY OF 40 LUMENS PER WATT
8	SOLAR PHOTOVOLTAIC: MINIMUM 1 WATT/SQ FT CONDITIONED FLOOR SPACE[e]
9	SOLAR WATER HEATING: MINIMUM OF 40 FT² OF GROSS COLLECTOR AREA[f]

FOR SI: 1 SQUARE FOOT = 0.093 M², 1 WATT PER SQUARE FOOT = 10.8 W/M²
a. FURNACES LOCATED WITHIN THE BUILDING ENVELOPE SHALL HAVE SEALED COMBUSTION AIR INSTALLED. COMBUSTION AIR SHALL BE DUCTED DIRECTLY FROM THE OUTDOORS.
b. DOCUMENTATION OF PERFORMANCE TESTED DUCTWORK SHALL BE SUBMITTED TO THE BUILDING OFFICIAL UPON COMPLETION OF WORK. THIS WORK SHALL BE PERFORMED BY A CONTRACTOR THAT IS CERTIFIED BY THE OREGON DEPARTMENT OF ENERGY'S (ODOE) RESIDENTIAL ENERGY TAX CREDIT PROGRAM AND DOCUMENTATION SHALL BE PROVIDED THAT WORK DEMONSTRATES CONFORMANCE TO ODOE DUCT PERFORMANCE STANDARDS.
c. A=ADVANCED FRAME CONSTRUCTION, WHICH SHALL PROVIDE FULL REQUIRED CEILING INSULATION VALUE TO THE OUTSIDE OF EXTERIOR WALLS
d. THE MAXIMUM VAULTED CEILING SURFACE AREA SHALL NOT BE GREATER THAT 50 PERCENT OF THE TOTAL HEATED SPACE FLOOR AREA UNLESS VAULTED AREA HAS A U-FACTOR NO GREATER THAN U-0.026.
e. SOLAR ELECTRIC SYSTEM SIZE SHALL INCLUDE DOCUMENTATION INDICATING THAT TOTAL SOLAR RESOURCE FRACTION IS NOT LESS THAN 75%.
f. SOLAR WATER HEATING PANELS SHALL BE SOLAR RATING AND CERTIFICATION CORPORATION (SRCC) STANDARD OG-300 CERTIFIED AND LABELED,WITH DOCUMENTATION INDICATING THAT TOTAL SOLAR RECOURCE FRACTION IS NOT LESS THAN 75%.

TABLE N1101.1(1)

PERSCRIPTIVE ENVELOPE REQUIREMENTS

BUILDING COMPONENT	MIN. REQUIRED VALUE
WALL INSULATION- ABOVE GRADE	R-21
WALL INSULATION- BELOW GRADE	R-15
FLAT CEILINGS	R-38
VAULTED CEILINGS	R-38
UNDERFLOORS	R-30
SLAB EDGE PERIMETER	R-15
HEATED SLAB INTERIOR	R-10
WINDOWS	U-0.35
SKYLIGHTS	U-0.60
EXTERIOR DOORS	U-0.20
EXTERIOR DOORS W/ 2.5 SQ. FT. GLAZING	U-0.40
FORCED AIR DUCT INSULATION	R-8

a. As allowed in Section N1101.4, termal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required U-value standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved U-values contained in Table N1104.1(1).

b. R-values used in this table are nominal, for the insulation only in standard wood frameed construction and not for the entire assembly.

c. Wall insulation requirements apply to all exterior wood framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. R-19 advanced Frame or 2x4 wall with rigid inulation may be substituted if total nominal insulation R-value is 18.5 or greater.

e. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such walls that extend more than 24 inches above grade.

f. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar featrues totaling not more than 150 squaur feet in area may be reduced to not less than R-21. when reduced, the cavity shall be filled (except for required vent spaces)

g. The maximum vaulted ceiling surface area shall not be greater than 50% of the total heated space floor area unless area has a U-factor no greater than U-0.031. The factor of 0.042 is represetative of a vaulted scissor truss. A 10 inch deep rafter vaulted ceiling with R-30 insultation is U-0.0033 and complies with this requirement, not to exceed 50% of the total heated space floor area.

j. Sliding glass doors shall comply with window performance requirements.

k. Reduced area may not be used as a trade off criterion for thermal performance of any component.

m. A maximum of 28 square feet of exterior door area per dwelling unit can have a U-factor of .54 or less.

n. Glazing that is either double pane with low-e coating on one surface, or triple pane shall be deemed to comply with this u-.40 requirement.

FLOOR PLAN NOTES

1. EACH BEDROOM TO HAVE A MINIMUM WINDOW OPENING OF 5.7 SQ FT WITH A MIN. WIDTH OF 20" AND A MIN. HEIGHT OF 22" AND A SILL LESS THAN 44" OFF THE FLOOR.
2. ALL WINDOWS WITHIN 18" OF THE FLOOR AND WITHIN 24" OF ANY DOOR ARE TO HAVE TEMPERED GLAZING. SEE SECTION R308.4 IN ORSC FOR ADDITIONAL INFO.
3. SKYLITES ARE TO BE GLAZED WITH TEMPERED GLASS ON OUTSIDE AND LAMINATED GLASS ON INSIDE (UNLESS PLEXIGLAS). GLASS TO HAVE MAXIMUM CLEAR SPAN OF 25". SKYLITE FRAME IS TO BE ATTACHED TO A 2 X CURB WITH MINIMUM OF 4" ABOVE ROOF PLANE.
4. ALL TUB OR SHOWER ENCLOSURES ARE TO BE GLAZED WITH SAFETY GLAZING.
5. ALL EXTERIOR WINDOWS ARE TO BE DOUBLE GLAZED AND ALL EXTERIOR DOORS ARE TO BE SOLID CORE WITH WEATHERSTRIPPING. PROVIDE 1/2" DEADBOLT LOCKS ON ALL EXTERIOR DOORS AND LOCKING DEVICES ON ALL DOORS OR WINDOWS WITHIN 10' (VERTICAL) OF GRADE. PROVIDE PEEP-HOLE @ 54" - 66" ABOVE FLOOR ON EXTERIOR DOORS.
6. PROVIDE COMBUSTION AIR VENTS (W/ SCREEN AND BACK DAMPER) FOR FIREPLACES, WOOD STOVES AND ANY APPLIANCES WITH AN OPEN FLAME.
7. BATHROOMS AND UTILITY ROOMS ARE TO BE VENTED TO THE OUTSIDE WITH A MINIMUM OF A 90 CFM FAN. RANGE HOODS ARE ALSO TO BE VENTED TO OUTSIDE.

SECTION N1107

LIGHTING

A MINIMUM OF FIFTY PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE COMPACT OR LINEAR FLUORESCENT, OR A LIGHTING SOURCE THAT HAS A MINIMUM EFFICACY OF 40 LUMENS PER INPUTT WATT.
SCREW-IN COMPACT FLORESCENT LAMPS COMPLY WITH THIS REQUIREMENT.

THE BUILDING OFFICIAL SHALL BE NOTIFIED IN WRITING AT THE FINAL INSPECTION THAT A MINIMUM OF FIFTY PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES ARE COMPACT PR LINEAR FLUORESCENT, OR A MINIMUM EFFICACY OF 40 LUMENS PER INPUT WATT.

NOTES SHEET

SUNTEL DESIGN

16865 BOONES FERRY ROAD
SUITE 103
LAKE OSWEGO, OR 97035
(503) 624 0555

PLAN NR:
SHEET DESCRIP: DETAILS
JOB NAME:
DATE: 7/08
REV:
SHEET NR: N

A NORTHWEST DESIGN